

WHAT IS CLAIMED IS:

1 ~~SAI~~ A voice and data communication system comprising a customer
2 premises equipment (CPE) element and a line card for transferring communication
3 signals between a subscriber and a network, said line card comprising:

4 an analog front end for coupling said line card to said CPE through a
5 transmission medium;

6 a digitizer for digitizing received voice signals;

7 a packetizer for packetizing said digitized voice signals;

8 a modem for transmitting voice and data packets to said CPE; and

9 a system interface for coupling said line card to at least one network;

10 wherein said line card digitizes and packetizes said voice signals upon
11 failure of said CPE.

1 2. A system as defined in claim 1, wherein said CPE comprises:

2 a digitizer for digitizing received voice signals;

3 a packetizer for packetizing said digitized voice signals;

4 a modem for transmitting voice packets; and

5 a switch for bypassing said packetizing system to a Plain Old Telephone
6 System (POTS) terminal.

1 3. A system as defined in claim 2, wherein said switch is a relay for
2 switching between said packetizer and said POTS system.

1 4. A system as defined in claim 3, wherein the position of said switch
2 is determined by a signal, said signal indicating the status of the connection between said
3 CPE and said line card.

1 5. A system as defined in claim 1, wherein said modem is a Digital
2 Subscriber Line (DSL) modem.

1 6. A system as defined in claim 2, wherein said line card packetizes
2 said voice signals upon failure of said CPE to do so, and wherein digitizing and
3 packetizing equipment of said CPE is bypassed.

1 7. A system as defined in claim 2, wherein said failure is a power
2 failure at said subscriber's location.

1 8. A system as defined in claim 2, wherein said failure is inability to
2 synchronize a DSL modem on said CPE with a DSL modem on said line card.

1 9. A system as defined in claim 2, wherein said digitizers provide
2 high quality audio encoding.

1 10. A system as defined in claim 2, wherein said packetizers provide
2 high quality audio encoding.

1 11. A system for providing a voice signal for transmission comprising
2 a line card for receiving said voice signal from a telephone, said line card including:

3 an analog front end for coupling said line card to said telephone;

4 a digitizer for digitizing received voice signals;

5 a packetizer for packetizing said digitized voice signals;

6 a modem for receiving voice packets from a CPE and transmitting said
7 voice packets to a data network;

8 a system interface for coupling said line card to a voice network and said
9 data network; and

10 a controller for controlling the destination of said voice signal;

11 wherein said system can provide said voice signals to said voice network
12 and said data network.

1 12. A system as defined in claim 11, wherein said line card is operative
2 to receive a data signal on the same loop as said voice signal, said analog front end

3 separates said data signal from said voice signal, and said modem transmits said data
4 signal to said data network.

1 13. A system as defined in claim 11, wherein said modem is a DSL
2 modem.